

DEVIDING METHOD OF SEMICONDUCTOR DEVICE

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Inventor(s): MAEYAMA IDEO

Applicant(s): MITSUBISHI ELECTRIC CORP

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Abstract

PURPOSE: To improve the yield of the chip for the SOS type semiconductor device by dividing it with the mechanical strain given after a groove is formed with laser beam on the bottom of the sapphire corresponding to a scratch previously given at the intended portions of Si monocrystal.

CONSTITUTION: A scratch 7 is formed by a diamond scribe or a diamond saw with the diamond cutter at the division-designated points on the Si monocrystalline layer 3 of the SOS type semiconductor device 1. Then, the sapphire substrate 2 is inverted and a groove 8 is formed with laser beam 6 on the bottom thereof corresponding to the scratch 7. Then, a mechanical stress is applied from the Si monocrystal side to divide the substrate into individual chips through the scratch and the groove. This prevent cracks from developing in the area other than designated point thereby attaining accurate division and improving the yield.

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